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A CONTRIBUTION TO THE STUDY

OF

POST-NASAL CATARRH.

BY

BEVERLEY ROBINSON, M.D.,

One of the Instructors in Laryngoscopy, Bellevue Hospital Medical College, N. Y.; Surgeon to the Manhattan Eye and Ear Hospital (Throat Department), &c., &c.

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Read before the N. Y. County Medical Society, September 27th, 1875.

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MR. PRESIDENT AND GENTLEMEN:

I shall endeavor to present to you this evening, in as clear and interesting a manner as I am able, certain considerations which I deem of importance in regard to a disease so little understood, and yet so prevalent in our country.

Much, it is true, has been written on the subject, and the symptoms and sequelæ of the malady are tolerably familiar to all practitioners of medicine.

The *true* pathology of post-nasal catarrh has not, however, been described, and its treatment has hitherto proved most unsatisfactory. There are, indeed, a few of our colleagues who boldly affirm that they have *cured many cases* of long standing, and which to other practitioners have shown themselves refractory to all the ordinary therapeutic methods. And this may be accomplished, they tell us, in a very rapid manner, by means of caustic solutions applied to all those parts which are the seat of the morbid processus.

Unfortunately, those remedies which are so efficacious in the hands of a few among us have not been equally useful when tried by others in cases apparently altogether similar. This fact has produced *scepticism* in many minds, with respect to the utility of mere local measures of relief,—and numerous specialists *now* admit the necessity of general medication, adjoined to topical applications, if we may fairly look to a *per-*

manent recovery from the disease. These latter, however, are not inclined to underestimate the difficulty of attaining this result. On the contrary, they acknowledge, though with unfeigned regret, that their best-directed efforts are at times completely baffled.

Such testimony, on the part of men who possess high professional qualifications, goes to corroborate the assertion, that the *true nature and treatment of post-nasal catarrh* are still unknown.

We also, in company with several of our contemporaries, held this belief. At present we are less inclined to make a like admission. Without doubt, many points of its history are imperfect, and research and study are yet required to unravel much that is obscure. Nevertheless, we feel confident that something *real* in the way of progress has been acquired for us, and the goal towards which we are directing our efforts is *not* so far removed as formerly. At first, in our treatment of post-nasal catarrh, we made use of those remedies, both local and systemic, which are usually employed. Little by little our faith was shaken, and methods received and put in requisition for a time as useful were afterwards entirely abandoned. Some there were so well adapted to the obvious remedial indications, that we were loth to throw them aside, believing that we held the panacea of a distressing infirmity. More than once our highest anticipations have been followed by deception, and though to-day our appreciation of what we shall offer you in the following pages is tempered by our remembrance of *former* erroneous convictions, we trust our experience has *not* been without bearing some good fruit.

Before making known to you our belief with respect to the true nature and treatment of post-nasal catarrh, we desire to direct your attention for a few moments to our means of examining the nasal and naso-pharyngeal cavities.

For this object we are provided with three essential instruments: 1st, A small mirror; 2d, a reflector; 3d, a tongue-spatula, and one necessary element, *viz.*, light.

With these aids of our physical investigation, a specialist in rhinoscopy should be able to see and investigate, in many cases, the entire superficies of the naso-pharyngeal space. He ought also to acquire an accurate image of the posterior nares

and of a limited space within their cavities. But even with a tolerant and—anatomically regarded—well-adapted patient, the most acute vision is unable to penetrate the exact condition of the whole Schneiderian membrane.

This, because it is a homely truth to those who have daily opportunities of verifying it, is not unworthy of being more generally disseminated.

When, however, the patient is nervous, or otherwise intolerant of rhinoscopy, or the space between the soft palate and pharyngeal wall is small, a really satisfactory examination is very difficult, and at times becomes quite impossible. We at once perceive, in spite of our more advanced methods of research than were known to former observers, how deficient they are proved to be in individual instances. And occasionally we are called upon to regret the fact, that these examples are the ones, a close study of which would perhaps furnish us with much-coveted knowledge. Let us now consider the illustrations of our subject, where physical instruments have thrown upon our retina a correct image of those diseased parts which are brought by their help within the range of vision.

Here, indeed, clinical observation has given us, according to some, all the information we can fairly hope for at its hands. But accepting for the moment this affirmation as an expression of truth, is this knowledge then all-sufficient? Are we authorized to infer absolutely, or without possible cause of error, from what is seen to what is unseen? Unfortunately not. For modern pathology, armed with lenses of great power, informs us too plainly that even accurate clinical observation must be affixed to an intimate acquaintance with morbid structure, in order to possess the complete interpretation of any disease. How frequently, we may ask, have post-mortem investigations been made in the malady under consideration? Without fear of denial, the answer can be given—*very few.*

Nor is this to be wondered at. Neither should it be received as evidence that laryngoscopists are less ardent in their work than other members of the medical profession, for the fact is capable of an easy and natural explanation.

Patients do not die directly of post-nasal catarrh, and when they have died of other intercurrent, acute, or chronic disease, the latter predominates the situation, and little or no

regard is paid to the anatomical investigation of the primary affection. So we find that our knowledge of this special catarrhal trouble is necessarily imperfect, and if we have not, as yet, determined where the seat and what the nature of the malady really are, our dearth of pathological instruction will afford a partial explanation of it.

But, we ask, has clinical observation afforded all the results which it is capable of giving? For our part, we can hardly believe it.

Modern medicine, we all know, has advanced with rapid strides in various directions, and in none more than in that where insight of the intimate growth and structure of our organs is found. This is true without modification for every part of the body, when considered in its normal state.

In a diseased condition, organic tissue is not altogether so well known. Nor, in fact, has it been so exhaustively explored in every particular. There still remain here and there gaps to be filled up, and the want can be supplied only by new and more ample opportunities of study and research. One example of this has already been given. Others might be added, were not a general statement quite sufficient to render it acceptable.

So long, then, as facts are needed, pathology cannot be considered as a perfect science, nor fixed upon an immutable basis. Fresh data will still be acquired, and following close upon the discovery of these, other interpretations of familiar symptoms of disturbed function will be adopted. But while this view makes us augur well for the future, attendant dangers should not be completely lost sight of. Many physicians of our day, and especially those who are too ardent devotees at the shrine of Germany, are prone to attribute to every clinical fact observed only that importance which, after close microscopic study, appears to belong to it.

The general pathology or philosophy of medical science is much ignored, and everywhere we find an evident desire to localize agencies which are at work, and to limit their action and effects to some one particular tissue or organ. This is especially true of catarrhal affections; for without much regard to attendant circumstances, their presence is frequently accounted for by the influence of agents acting topically. They are then very naturally considered to be the offspring, as it were, of

a reunion of accidental conditions, affecting one or more individuals of a number.

When, however, a disease becomes widespread, and affects a very large number of individuals, such an interpretation is inadequate, and we are obliged to recur to some special climatic or atmospheric influence capable of being its efficient cause. This we accept already for many diseases, and most readily for those which are liable to become epidemic, extending themselves over large tracts of country, and attacking people of all sexes, ages, and conditions after a similar manner.

And our belief still remains to us, though numerous and accurate investigations with respect to the condition of the prevailing atmosphere have not, as yet, found out the contagium or infections principle.

Much of what precedes has its direct application to our subject, as will be recognized a little further on. Formerly, as our ancient authors who were of the period of Galen and Hippocrates inform us, nasal catarrh was believed to originate in the brain itself, and the watery, mucous, or purulent secretions which came from the nasal passages were said to descend from above, and to be a product of secretion of the diseased nerve-cells of central origin. Much later on in medical history, and owing to the exhaustive researches of Schneider, this erroneous idea of the first fathers in the art of healing was abandoned, and it was admitted of all, that ordinary cold in the head was a disease of the blood, and that the morbid secretions came from the small blood-vessels of the pituitary membrane. No further back than half a century ago the medical world was divided between those who considered all catarrhal inflammations, without regard to their localizations, as being manifestations of a general constitutional condition, and equally famous writers who considered them as purely inflammatory in character, and caused only by external influences. In our day, the latter opinion has, perhaps, been the more prevailing one, and such eminent scientists as Niemeyer have scouted the idea of nasal *catarrh* being aught else than local in its nature and its cause, and just as we are informed that exposure of the head to a cold or humid wind with insufficient covering will surely produce an acute coryza, or wetting of the feet a case of catarrhal laryngitis, so we are told that an infusion of elder-flowers and a

flannel undershirt will rid one of either or of both. Great illustrations of an antagonistic pathological school in France, like Mouneret, Chauffard, Jaccoud, Bonillaud, have bravely entered the lists in favor of their own—not less authorized or less well-defended belief. So the problem rests in abeyance, and it is for the future to determine which of the contending parties is right. In a question where clinical experience must of necessity be our main reliance, the wise interpretation of this experience will eventually give us the solution.

In New York, Boston and Philadelphia, in many of our Western cities, on the sea-shore and in the interior, in fact, over widely extended and very different sections of our country, nasal catarrh prevails to an extent which originates much inquiry, and occasions more than passing anxiety to those who have observed its course. Vast numbers of people are already affected with it. Men, women, and children are alike its prey. All ages and professions are subjected to its symptoms and complications. Moderate differences or changes of climate only partially affect its growth; for while in individual instances its onward and rapidly progressive march appears to be somewhat delayed, if not completely arrested, by breathing a high, equable, and dry atmosphere, or by the respiration of air impregnated with balsamic odors, other and numerous examples there are when, once the catarrhal affection has become firmly seated, but little influence for the better by the most rational hygiene and an ambient medium, seemingly the most perfectly adapted to their individual needs. Usually speaking, however, a cold, damp atmosphere, subject to sudden and great changes of temperature, is supposed to be a general and efficient, if not exclusive, cause of the production and extension of post-nasal catarrh. No doubt this accepted belief has some basis in fact, and yet the more closely we have been able to investigate the subject, in its multiple aspects, the more thoroughly are we persuaded that the received opinion is in part erroneous.

The development of the malady is not much affected by habit or occupations, and strong and weak organizations are similarly attacked. No constitution is entirely exempt, but certain persons are more disposed to contract it than others.

While we believe, therefore, that certain accidental conditions

may be instrumental of its manifestation in the first instance, we are convinced, in an equal measure, unless a special constitutional tendency exists in the individual, that he will but rarely take it, and develop it to any very great and annoying degree. Post-nasal catarrh must not be confounded, as it almost universally is, with ordinary rhinitis. It is not simply an acute or chronic inflammatory condition of the pituitary membrane, nor should it, therefore, be treated in the same way, for if it is, signal failure almost will follow our every effort. Once more, we add, an acute or chronic coryza is, without doubt, a predisposing and, at times, a proximate and partially efficient cause of its becoming manifest. But in order to effect the grafting of post-nasal catarrh upon the nasal and pharyngeal mucous linings in a permanent manner, a certain diathetic condition is essential. The affection has existed, so to speak, in germ previously, when by reason of one or more attacks of cold it takes on its full growth, and from *latent*, that it was, it is rendered obvious, as regards both its pathology and symptoms, to whoever will inquire diligently for its signs and their clear signification.

And here the question presents itself as to what should be understood as chronic post-nasal catarrh.

For our part, we interpret it to be none other than chronic follicular disease of the nasal and naso-pharyngeal cavities. Whether this disease is one and the same as that described by Horace Green, M.D., under a like name, and when it affects the pharynx and larynx, we are not prepared to assert in a positive manner. We are certainly very much inclined to this belief, and yet we are prevented from pinning our faith too closely to it for the following reasons, viz.: We have seen evident cases of granular, or follicular disease of the fauces and pharynx, in which no hyper-glandular development was visible in the spaces situated above, and in which there was none of that hawking or falling down of viscid mucus from the superior surface of the soft palate, so characteristic of post-nasal catarrh. These cases are rare, but they are not unknown to those who have treated large numbers of throat cases. Again, we have not made anatomical researches in such instances, so as to be able to determine precisely what the condition of the follicles in the naso-pharyngeal and nasal cavities really is.

We are thrown back, therefore, upon the proper translation of clinical facts pertaining to our subject, and upon the support which is also afforded us by observation of the morbid mucous membrane in catarrh of the laryngo-bronchic and stomacho-intestinal tracts. Both of these sources of information point in the direction of opinion—1st, that catarrh of the post-nasal passages is merely a local determination of a diathetic condition; 2d, that it is essentially the same affection with chronic follicular disease of the throat and remaining portion of the air passages.

The well-known and most accurate observer, to whom we are much indebted for our knowledge of many particulars of the disease, when localized in the portion of the pharynx, where it could be easily distinguished with the unaided vision, did not handle in so masterly a manner that section, as it were, which could be comprehended at first in its *entirety* only by a rhinoscopist. It is more particularly, therefore, in what has reference to special study that our notes and criticisms may, we trust, be of some value. *Follicular disease of the nasopharyngeal space* is characterized by two constant symptoms: 1st, a sensation of *stuffiness*, or oppressive fulness in the superior and posterior portion of the nasal passages; 2d, the falling down from above the palate and from the posterior nares of a greater or less quantity of mucus, which, according to the age, extent, and severity of the disease, may also vary in physical characters. It may consist of small, starchy pellets or masses of viscid, tenacious, and almost colorless secretion, without odor, which are surrounded by a foamy, aerated expectoration, or of larger, heavier, yellow or greenish muscle-like conglomerations of an essentially muco-purulent nature. All other symptoms (and their name is legion) generally attributed to catarrh may or may not be present, and, at all events, are certainly never pathognomonic of it.

The symptom of *stuffiness* is, without doubt, occasioned in great part by the presence of the sputa just mentioned, though it is frequently aggravated or rendered more intolerable by concomitant hypertrophy of the turbinated bones.

At times masses of morbid secretion are seen trickling slowly down the post-pharyngeal wall. These become visible by simple inspection when the mouth is moderately distended.

In less advanced stages, in order to render their existence apparent, it is necessary to make use of the rhinoscopic mirror. We shall then perceive them as they hang down from the fornix or roof of the vault, or from the superior limit of the septum or posterior nares, and somewhat resembling stalactites suspended from the roof and walls of a subterranean grotto. The outline of these parts is partially obscured or almost hidden from view, and the posterior nares themselves are in part blocked up. This is carried to such an extent in certain instances that we comprehend with some difficulty how respiration is carried on through the nasal passages. And surely in these examples there is little or no difficulty in convincing ourselves of the essential feature of the disease, or indeed of the main source of the unpleasant sensations experienced.

These masses of mucus, or of muco-pus, at first contain a certain quantity of watery fluid, and are of semi-solid consistence. They are then less adherent to the adjacent parts, and if they do not separate themselves from them little by little, and fall down into the median portion of the throat, they may be roughly torn away from their attachments by one or more efforts of hawking.

After a longer or shorter period of time, usually, however, when the disease has been in existence and uncared-for during several years, the masses of mucus or muco-pus become hardened, concrete and inspissated while still in contact with the mucous membrane. And the membrane itself having lost in a great measure its normal amount of sensibility, the patient becomes less aware of, or less disturbed by, their continued presence. Active efforts are not made to detach and expel them when first formed, and they go on accumulating upon their primitive seat. Having this fact in view, it is very easy to account for their hardening. Remaining in situ for quite a period of time, or estimated roughly from twenty-four hours to a lapse of several days, they lose their watery constituents—and this is effected by the evaporation which takes place in their composition, and which is due to the frequent passage of the inspired and expired air through the nasal cavities. This hardening process is not the only evil attendant upon their remaining in place. These masses take on a bad odor, become fetid and most offensive to taste and smell. The repulsive odor is

a result of decomposition, and can only be relieved at times by a long-continued course of appropriate treatment, of which the disinfectants are the main class of agents to be employed. Again, the hardened masses of mucus finally act like foreign bodies of an irritating nature, which have remained for a considerable time in contact with an organized and sensitive membrane. They are apt to increase a chronic inflammatory processus already present, and unless got rid of, will eventually and fatally produce ulceration; and in rare cases this ulcerative degeneration of tissue will be an onward step towards necrosis.

The seat of the ulceration is, of course, at first that of the concrete masses of mucus, since these are the principal and proximate cause of their production. At a later period, and when ulcerations have been in existence for some time, they may be found not only on the septum, the roof of the posterior nares and the vault of the pharynx, but are also apt to occur upon the turbinate bones and walls of the nasal fossæ. Excepting those cases where the posterior extremities of the turbinate bones, or the nasal fossæ, very close to the nasopharyngeal space, are ulcerated, we are not able to perceive this condition by actual inspection during life, and are merely permitted to infer its existence far within the fossæ by inductive reasoning.

There are frequent occasions, and though the *masses* of morbid secretion are visible by the aid of the rhinoscopic mirror, in the naso-pharyngeal space, when the patient is unable to hawk them into the back of his throat, so as to be able to spit them out, no matter what and how great his efforts are, and it is only after drinking or gargling the throat with some warm or bland fluid that the glandular secretion is increased so rapidly, and with such good effect, that relatively old secretions are separated from the parts to which they were previously adherent, and fall into a region where they are under the dominion of the voluntary muscles, and can be altogether and quickly expelled from the body. The mucous or muco-purulent secretion is the product, to a great extent, of the glandular follicles situated at the vault and on the lateral walls of the upper portion of the pharynx, and also on both

sides of the posterior border of the septum, and on the posterior extremities of the turbinated bones.

At times, and in small proportion, it would seem that the glands situated in the posterior ethmoidal cells gave rise to a certain amount of the morbid secretion, as is evinced in a measure by the falling down of stringy mucus behind the palate, more especially when the patient is in the dorsal decubitus.

And yet histological research informs us that the ethmoidal sinuses contain very few mucous follicles, and for this reason, even though we may admit that these become or are diseased, we cannot admit that their existence and diseased condition would be sufficient to explain the amount of mucus secreted, unless the other follicles already mentioned have also a share, and a much more important one, in occasioning the disagreeable symptoms of the disease.

The glandular follicles of the middle and anterior portions of the nasal passages do not in this affection secrete nearly so much viscid mucus as those which are situated in the posterior regions. And the sense of obstruction, if it is located by the patient's subjective sensations in the former region, proceeds probably from a temporary or permanent infiltration of the mucous or sub-mucous layers. It is likewise possible whenever the portion of pituitary membrane covering the anterior and middle portions of the septum and turbinated bones becomes so much thickened as to produce contact between these boundary walls of the fossæ that *mutual compression* may be sufficient to almost completely obliterate the external orifice of the follicles, and thus to diminish or cut off altogether the outflow of glandular secretion. No doubt the sensation of dryness which old catarrhal patients have is accentuated in part owing to this fact, and also by the blocking up of the nasal ducts, which prevents the tears from flowing by them into the nasal fossæ, and thus effecting their lubricifying influence.

But, as we have remarked previously, we do not consider hypertrophy of tissue here as being a symptom in the usual march of catarrh.

It should, on the contrary, be estimated as a sequela or complication, which is frequently due to the catarrh—frequently also, though not always brought on by faulty and pernicious

methods of treatment. It is likewise one which lends additional trouble and gravity to the follicular affection.

And just as its anatomical seat and conditions are unlike, so its treatment should be different.

Of course, catarrhal patients, like other patients, may have *ulcerations* of septum, turbinated bones, and fornix, [this we have previously indicated,] and vegetations or polypi of divers sorts, taking origin from different points of the same regions. But these outgrowths, losses, heterogeneous productions of tissue, are in nowise to be regarded as forming necessary elements of post-nasal follicular disease. The diagnosis of their presence should be made separately and with all accuracy possible, for they will often give rise to somewhat similar symptoms with the simple catarrhal affection, and are frequently, through ignorance or want of attention, confounded with it.

We can at once appreciate to what bad results of treatment such errors or oversights infallibly lead.

Take, for example, the old-time practitioner, or even one of later date, but who is not familiar with recent methods of examination, and see how he must almost of necessity fail of exact interpretation and sound treatment of maladies respecting which he labors in the dark. Every trouble of the nose or throat which gives rise to the first two symptoms, marked as essential, are to him pathognomonic of catarrh, unless he is able with his unaided vision to distinguish other pathological conditions.

Manifestly, therefore, if he be bold enough to go on with his treatment, though he can have made but a very imperfect and inaccurate diagnosis, he will, in many instances, fail to accomplish a cure, where a physician who can assign the *rôle* of each analogous or dissimilar state of organ would immediately place his patient under suitable treatment. And so in the one case the patient remains stationary, or goes on from bad to worse, whereas in the other he has the advantage of the last word of human science and skill, and will sooner or later establish a permanent recovery.

When ~~the~~ treatment is desirable, what are the indications which should guide us in the selection of remedial agents for the disease?

Inasmuch as we believe that follicular disease of the naso-

pharyngeal space is under the dependence of a general diathetic condition, we naturally consider systemic treatment of primary importance. Previous to the exhibition of medicaments, the beneficial effects of which upon a morbid condition of the air-passages are known, we bring into use, as a rule, one or more of those drugs noted for their corroborative power.

Iron, quinine, cod-liver oil, arsenic and strychnia have been severally employed on different occasions, and in variable doses. And we do this in the belief that many of our patients give evidence of anaemia, loss of flesh, or a general debilitated condition, in which the nervous system enters for its share. While, however, many old cases of catarrh are grafted upon a worn-out or broken-down state of the organism, where the drugs just mentioned are valuable adjuncts, there are frequent examples where the patient has been in the enjoyment of a fair amount of health, and there do *not* appear to exist marked indications for the employment of tonic treatment. In the first division, also, we merely attribute importance to strengthening measures, while we have in view the state of *general* health, for their practical utility, looked at with regard to their local influence for good, is not at all times evident. True it is, nevertheless, that habitual cold bathing, a highly azotized food, abundance of exercise in the open air, aided by an occasional tonic treatment when the season is unusually trying, or normal health and vigor somewhat impaired by over-work or anxiety, will be able to ward off effectually for a while the pernicious effect of individual predisposition and climateric influences. But if post-nasal catarrh is permitted to become once firmly established, the two latter all-powerful factors of the disease will render complete recovery quite impossible, unless special, general and topical medication be employed both rationally and with system. The desiderata wished for in this connection are in our estimation : 1st, some one particular medicament, or a combination of medicaments, given internally in suitable doses and at well-regulated intervals, which will affect in the best possible manner the glands and mucous lining of the throat and nose; 2d, a topical application which will answer like indications.

In order to discover, if possible, the first one of these much-wished and sought-for prizes, we have not thought it unworthy of patience and endeavor, on our part, to experiment with

nearly all the known agents of the pharmacopœia, which are referred to as having a useful therapeutic effect upon mucous membranes in a diseased condition. Chlorate and iodide of potash; carbonate and muriate of ammonia; ammoniacum, guaiacum, ipecac, squills, sulphur, mercury, cubebs, copaiba, and still others have been faithfully and persistently tried by us, in different typical cases, singly or in varied combination, and in large or small, continued or frequent doses.

Each one of the drugs named have appeared to be, in individual instances, of real advantage to the patient, and their beneficial effects have been of longer or shorter duration. Occasionally cures have been, we are intimately persuaded, established; much more frequently, only temporary relief has resulted from their administration. Whenever what for *the time* was obviously a perfect recovery has taken place, local remedies have been employed concomitantly with general measures of treatment. Finding that our success was so variable, we have finally been led to the conviction that while follicular disease is at times due to the catarrhal diathesis pure and simple, so it may be, and frequently is, attached to the gouty, herpetic, syphilitic, scrofulous and tubercular. The malarial influence may likewise be evident, and anti-periodic remedies may then prove to be of the greatest service, when other remedies fail entirely to produce good results. When any of the above constitutional conditions, which may be either hereditary or acquired, exist, manifest indications arise which we will do well to consider, and to some extent be influenced by them.

Before mentioning, however, the remedies we have put in requisition in these last-named cases, let me say a few words with respect to three medicaments which I believe will be found most useful in the treatment of follicular disease of the nasopharyngeal space, where the patient is free from any other diathesis.

These three are sulphur, cubebs, and ammoniacum.

For quite a time we have given sulphur-water from the White Sulphur Spring of Sharon. It has been taken in doses of a tumblerful three times a day, and several of our patients have acknowledged how instrumental it proved in ameliorating their condition.

There is nothing new assuredly to European observers, more

particularly to the French, in the use and efficacy of sulphur in throat and bronchial troubles. In the United States, if one may be able fairly to judge the question by the perusal of special articles in our ordinary text-books, or those in contemporary medical periodicals, the same value is *not* attached to its employment in these cases. When it is made use of under the form of spray into the nasal passages, we do not believe that sulphur-water is anything like so beneficial in its results as when given by the stomach. For employed internally, we secure the advantageous effect of its elimination in part by the mucous linings, and we avoid what we are convinced is frequently injurious, *viz.*, the irritating and oft-repeated contact of solutions, composed in great part of water, through the nasal fossæ.

Cubebæ is likewise a drug which stands very high in our estimation. *Alone*, it will be, in many instances, of very great assistance when other drugs have entirely failed in their effects, and combined with suitably formulated powders or solutions employed topically, it will cure, I am persuaded, a certain number of old and very obstinate cases of catarrhal trouble.

At first, we used the oleo-resin, and from the poor results we accomplished with this preparation we were disposed to consider the drug itself as much over-rated and relatively inert. Fortunately, we were induced some time ago, after the perusal of a remarkable pamphlet by Mr. Trudeau, relative to its exhibition to patients attacked with toxic diphtheria, to try its effects when given in powder under the form of a mixture or confection, and in large doses continued for several weeks or months. If given for this last-mentioned period, it is well to interrupt its administration for a few days every two weeks, so as to allow the patient to recover from its too constant influence. The following is in our experience an excellent formula, which we can entirely recommend to those who desire to make a trial of cubebæ in fresh-ground powder—

B. Pulv. cubebæ.....	$\frac{3}{2}$ ij.
Syrupi aurantii.....	$\frac{3}{2}$ iiij.
Aq. menth. pip	$\frac{3}{2}$ ij.
Aqnam ad.....	$\frac{3}{2}$ viii.

M.

S.—A teaspoonful to be given every two or three hours—up to 8 or 10 teaspoonfuls in the 24 h., depending upon the tolerance of the patient on the one hand, the amount of secretion on the other. Usually our patients have had no difficulty in taking the cubeb mixture. It may be given before, after, or between meals ; and although it causes at times some nausea and diarrhoea, or an erythematous or slightly papular eruption upon the skin, these phenomena are *not* frequently observed, nor at any time of such character as not to be immediately influenced favorably by giving the medicine in smaller doses, or putting a stop to its use altogether for a few days. Cubeb in nature is certainly eliminated from the system in part through the glands of the throat and nose. And these follicles are changed little by little by its persistent exhibition from a morbid to a healthy condition. The nature and amount of their secretion is modified. It becomes less and less in quantity, and besides loses its acrid effect and unpleasant, not to say offensive, odor.

Though its viscosity does not immediately disappear, this result will likewise be ultimately produced. The stufulness and constant hawking will gradually be diminished, and the ability of breathing through the nasal cavities be somewhat improved. It also gives a sensation of freshness, which lasts for quite a time, to the mucous membrane of the nasal cavities ; and to those who have had that disagreeable feeling of dryness of these parts, which is so often present with catarrh of the nose, this is no inconsiderable advantage.

In the third place, ammoniacum should not be omitted in this cursory examination. When it is combined in *very* small doses (gr. i.-iiij.), with analogous expectorants, such as ipecac and carbonate of ammonia, it will greatly lessen the amount of secretion. If, by the action of these combined drugs, this product should become too viscid and adherent, and the pharynx become raw and painful owing to repeated hawking, this inconvenience may be overcome by the occasional use of the carbolic and soda spray (hereinafter mentioned), and the mixture may, as a rule, be continued without interruption.

But these medicaments are not by themselves always sufficient to produce a rapid or permanent beneficial change of the glandular affection, even though it be of simple uncomplicated

type. Local sprays and powders of the sort we shall make known presently are frequently essential adjuncts to the treatment in order to render it successful. But before speaking of these, permit me to add here a few words with respect to what remedies we should employ when other influences than a purely catarrhal one are at work. A certain number of such patients are obviously dominated by malaria. Their systems are literally poisoned by this dyscrastic affection, and it has manifested itself also upon the mucous membrane of the throat and nose.

These patients are not so often encountered as some practitioners assert. They do occur, however, and when we encounter one such case, be sure and give alone, or in conjunction with cubeb, moderately large doses of quinine, say from 15 to 30 grains daily. Its influence for good in these instances is unquestionable.

In gouty patients *guaiacum*, under the form of the ammoniated tincture, has, we believe, effected more than one cure. Where syphilis exists, and without regard to the stage at which it has arrived, give small doses of mercury, more particularly the bichloride or biniodide, and continue them during many weeks and months. As regards the iodide of potash, we have little to say in its favor. We are fully aware that an active and beneficial influence in catarrhal affections of the air passages has been urgently claimed for it of late by more than one eminent practitioner of medicine.

To this we cannot subscribe, in so far as our experience goes, with respect to its use in follicular disease of the post-nasal space. True it is, when first given, it lessens the viscosity of the secretion from these parts, as do other salts of the alkalies, and congests or inflames them in a very obvious manner. When taken for one or more days consecutively and in moderately large doses, it will usually produce a very red and swollen condition of the mucous membrane of the nasal passages. The nose will become so much stopped up as to interfere with ordinary respiration through the nasal fossæ, and thus cause a great deal of annoyance. Subsequently there is a considerable transudation of watery fluid from the vessels of the pituitary membrane, and increased discharge from the glandular follicles. The habitual symptoms of an acute attack of coryza are established, and all of its disagreeable features are occasionally

highly accentuated. If the iodide be continued at the same dose, this manifestation of iodism may remain for some time, or else subside gradually after a few days. In either case, and when after thorough and prolonged trial this medicine is altogether abandoned, we have remarked but very infrequently, that the post-nasal catarrh had been at all benefited. And we are at present inclined to affirm that iodide of potash has very little, if any, *real* value in the treatment of follicular disease of the naso-pharyngeal space. Latterly, we have rarely prescribed it in cases of this sort, with the hope of alleviating the catarrhal condition, and even though the patient may furnish us with a syphilitic history and offer upon his body certain distinct manifestations of an early or advanced stage of the other specific constitutional disease.

Serofula and tuberculosis may perhaps be decidedly benefitted by the co-operation of cod-liver oil and a proper change of climate ; but we are all too familiar with such cases, their long march, wearisome complications, and dread consequences, to be over-sanguine with regard to any method of caring for them now known to scientific observers.

LOCALLY, how should post-nasal catarrh be treated ?

It is, and has long been, a much-mooted, discussed, and very difficult question to answer.

Quacks and other false prophets have caught hold of it, and made it a fruitful source of profit to themselves, by pointing out to the public ready modes of treatment which must infallibly cure their suffering, but misguided and short-sighted, patients. Usually speaking, their remedies are predestined to work rapid recoveries, and no human organization is able to effectually resist their magical power for good during any appreciable lapse of time.

Further, we have soft-hearted and innocent divines, who publish long accounts of their experience and confidence in the columns of our daily press.

Meanwhile, we of the profession, who have regard for our present code of ethics, feel obliged to stand aside with folded arms, unable to appear in public and expose such shameful manoeuvres.

It may be permitted to me, however, to state here, this evening, that I have made a fair trial of more than one of these

catarrhal specifics which are sold by many well-known druggists in our city, and have not found them to respond favorably to their *false assurances*.

Amongst regular and honorable practitioners there is, unfortunately, no method of local treatment adopted as yet which carries recognized authority with it. All is still vague and uncertain. One physician uses this solution, another that; one practitioner believes in the curative action of powders of particular nature, and which are generally more or less astringent or caustic.

A third party think the main thing to have ever in view is the preservation of perfect cleanliness of the parts affected, by watery medicated douches. These douches, according to most authorities, should be warm, or even hot, in temperature. A few specialists, however, of wide repute, recommend cold injections (Duplay). In our opinion, local treatment (no matter what may be its conditions) is *never* so efficacious as it is frequently believed to be. And this, to us, is true for two reasons: 1st, there is no instrument in general use which will bring either medicated solutions, sprays, or powders into immediate contact with *all* points of the Schneiderian membrane; 2d, applied after the manner which is usually employed, they *cannot* be of *real* service.

With respect to the first, we argue that all medicated solutions, applied by means of the different instruments in vogue for this purpose—viz., the ordinary Weber's douche—(without regard to its different forms) Davidson's or Warner's syringe, the post-nasal syringe, etc., only reach a portion of the nasal cavities. This proposition has, we humbly believe, been proved by ourselves for the usual nasal douche with almost mathematical precision, in an article published in the *New York Medical Record*, August 1st, 1874. To this article we refer our hearers, and we will not repeat the arguments there employed in order to establish the fact.

And the first objection against the efficacy of local medication holds good, in our estimation, as well of finely atomized sprays and almost impalpable powders, as it does of solutions employed with a douche apparatus. Its accurate and evident demonstration is not, however, we candidly admit, so easily furnished.

To make our assertion, nevertheless, acceptable to many minds, it is only necessary they should recall: 1st, the numerous folds and infractions of the mucous membrane lining the nasal fossæ; 2d, the narrow orifices of communications which these latter have with several almost entirely closed cavities, such as the sphenoidal, ethmoidal, and frontal cells; 3d, the fact that the vertical diameter of the nasal passages, at their median portion, is double in extent the vertical diameter of the posterior openings of these same passages.

How, then, we may ask, is it *physically possible* for powders or sprays to reach all these parts; and even though this be admitted, can we accept that they will reach all points of the fossæ *in such quantity* as to be practically of much assistance in exercising curative results where the glands have been affected for a long while with a chronic morbid processus? With regard to the second objection, we argue that the solutions usually employed are not sufficiently concentrated to have any very great alterative effect upon the chronically diseased glands to which direct applications are made after this manner.

And yet we are so situated that we cannot, to any notable degree, increase the amount of the medicament employed, for by so doing the douche is rapidly rendered very painful.

But to this it may be answered, that if the douche is recognized to be instrumental of great benefit to our patients, we ought not to withhold its use because it causes great pain when properly employed.

True, if it were essential only to use the douche or injections once, twice, or several times. But such is not the case. On the contrary, in all cases of post-nasal catarrh, these washings must be made once or twice daily, and continued for several months, if any very apparent curative effects are to be anticipated on account of their employment. And to undergo this ordeal would require more patience and resolution than is frequently encountered.

The question now naturally presents itself, Whether or not any sort of local medication is useful or curative of post-nasal follicular disease, and in what measure?

To this we reply distinctly, that local treatment is a decidedly powerful adjunct of general treatment, but to be so, it must be carried on wisely and with rigid discrimination of the diag-

nostic features of each case. Not that, in the great majority of instances, we believe topical applications will or can reach all the diseased parts.

Nor are we convinced that alone they will produce absolute recoveries; for the best we should expect from them is, that they will materially aid and accelerate the effects of systemic remedies. For our part, as might be presumed from previous remarks, we at present do *not* use medicated solutions even in old cases of nasal catarrh, except in very exceptional cases, and never at all in cases of comparatively late date. Our line of conduct is traced for the following reasons, two of which have already been given, but which we shall repeat for the sake of clearness: 1st, they do not reach all parts of the nasal cavities; 2d, those parts which receive the contact of the medicated liquid are not sufficiently and favorably modified by the weak solutions, which are of necessity usually employed in this way; 3d, they cause disastrous consequences in the special organs of hearing and smell. With respect to the pernicious influence of these solutions on the auditory sense and in causing purulent otitis, we cannot do better than to refer those of our hearers who are not already familiar with them to Prof. St. John Roosa's learned investigations on the subject. As regards the hurtful action of watery medicated solutions used by means of the douche upon the olfactory sense, we beg leave not to enter into explanations at this time. Let it suffice that the fact be stated, and is without doubt true. Any thorough exposition of this subject would involve an account of another morbid condition intimately connected with it, and that is, the greatly hypertrophied condition of the turbinate bones, which is often found as a permanent sequela of nasal catarrh when it has lasted some time. The hyperplasia of the mucous and submucous layers which is then found is not infrequently, in our estimation, brought about more by the irrational employment of Weber's douche, than by the catarrhal affection itself. You will remember, however, we have considered this condition of mucous membrane to be a *complication* of chronic follicular disease of the naso-pharyngeal space, and not an essential and ever-present symptom of the disease. Its pathology and treatment both differ, and of necessity, with those of the primitive

affection. Besides, it could not be exhaustively detailed at this time without rendering our paper unduly long.

To return to our subject. To the use of solutions employed in the form of an interrupted stream, or of the continuous douche, we have substituted in our practice that of sprays and powders.

Sprays may be thus introduced into the nasal passages of a much greater degree of concentration without causing too intense pain, and without risk of injuring seriously the organs of smell or hearing, and they penetrate them quite as well as, if not more thoroughly than, injections. Besides, I have found sprays equally useful with the latter, when employed with a little persistence, in detaching hardened crusts of inspissated mucus from the nasal passages and post-nasal space. And their application is certainly far less irritating to the already inflamed membranes, and less irksome and annoying to the patient.

The temperature at which we should employ sprays is about that of the air we are habitually breathing. Very fine sprays approach nearly that state which we encounter in a foggy condition of the atmosphere, or in one where it is almost saturated with watery vapor. Now we all know that on the days when there is an excessive degree of moisture in the air, and the temperature considerably reduced, we feel heavy and oppressed, and that our respiratory action is not freely performed. One principal cause of this fact of our frequent experience is the exaggerated and continual imbibition of watery vapor by the mucous membrane lining our nasal cavities. The consequence is, it becomes infiltrated and swollen, and these passages are more or less obstructed, and their proper function appreciably interfered with.

This phenomenon is notably augmented, *cæteris paribus*, in proportion with the lowness of the column of mercury. It depends at last, then, upon the conditions which determine the direction of the endosmotic current across organic membranes. Under these two ambient conditions this current predominates towards the vessels contained in the mucous and sub-mucous layers of the nose. Our sprays should, therefore, be *warm*, but *not too warm*.

For, we are aware that very many people pass most of their

time, in winter and summer in rooms where the heat ranges from 70° to 80° Fah. scale. This, therefore, is about the temperature at which sprays are to be employed by them. And a similar degree of temperature will be required doubtless in these sprays when made use of by others who are the greater part of the day in the open air; for inasmuch as they are of necessity very constantly exposed to all vicissitudes of the surrounding elements, their mucous linings habituate themselves, in the majority of instances, to frequent and rapid changes in the ambient medium, and therefore a mean between extremes is a safe rule to guide us.

If sprays are employed at blood-heat, true it is that during the period of their use the endosmotic current is not so likely, other conditions being the same, to take the direction towards the interior of the vessels. Almost immediately after their use is interrupted, however, the exterior ambient air which is inspired lowers the temperature of the medicated liquid which remains in contact with the walls of the nasal passages, and so practically we have little or no advantage from using an atomized fluid at the temperature named. In a problem somewhat complex, we should choose the solution which appears least open to weighty objection, and our first indications are viewed in this light, the most correct we are able to formulate.

Sprays should be concentrated, but not enough so to be caustic in their action. In this connection we feel called upon to say, on account of the hold that this doctrine has upon the minds of several accomplished observers, and because we are persuaded they are under the influence of an erroneous belief, that the use of saturated solutions of different metallic salts, in the treatment of post-nasal catarrh, is radically wrong. As an example of what we wish to prove to you, take a highly concentrated solution of nitrate of silver, and let it be applied in spray to the post-nasal passages and vault of the pharynx, and what is the result? No doubt so intense an effect may readily be produced as to cover a great portion of the mucous lining with a superficial white slough, resulting from the combination formed between the nitrate and the albuminoid constituents of the membrane in and about the glandular orifices. And in this way, by putting a complete stop to all secretion

for some time, or aborting it temporarily, as it were, you may be able to create the impression in the mind of your patient, and even console yourself in the belief, that you have accomplished a cure. But wait for a few days (without prejudging the situation) after making one or several of these caustic applications, and what will you find? One of two things: either the same secretion returning as previously, and with exactly the same characters and in the same amount, or else the quantity of the secretion from the naso-pharyngeal spaces may be diminished, although there yet remain, and will continue to show themselves, small pellets of a viscid, tenacious mucus, or muco-pus, of disagreeable taste, which are expectorated from time to time after repeated efforts of hawking, and are a source of great annoyance.

And even the diminished amount of secretion is not to be considered a gain in one aspect, for it is fairly attributable to the fact that the mucous membrane has become thickened and hardened in consequence of repeated cauterization, and that many of the glandular orifices have become obliterated either by cicatrical closure of their external openings, or by pressure from the adjacent patch of mucous membrane. So much for the treatment of nasal catarrh by the much-vaunted applications of concentrated sprays of nitrate of silver, which theoretically cannot effect what it is pretended that they will do, if our view of the constitutional nature of catarrh be correct, and practically have led within our personal observation more than once to the above scarcely to be welcomed results.

The following formula of a solution to be used under the form of spray is a great favorite with us, and is somewhat modified from one recommended by Dr. Dobell, of London.

R. Acid. carbol. liq.....	iii xl.
Boracis, }	aa
Sodii bicarb. }	3 ij.
Glycerini.....	3 vij.
Aquam ad	5 viij.
M.	

This spray used morning and evening during four or five minutes, and in each nostril, by means of a hard rubber atomizer,

will act most favorably upon the catarrhal condition of the naso-pharyngeal space. After its use, the hardened secretions become moistened and detached in great part, and quickly descend into that portion of the pharynx from which they may be expelled readily by a slight effort of hawking and expectoration. It will also act as a very effectual deodorizer of the nasal fossæ, whenever the expired breath becomes offensive, owing to the chemical changes which take place frequently in the pent-up secretions.

Further, it acts favorably as an antiplastic remedy, thanks to the amount of alkali which enters into its composition, and will subdue, *in a measure*, the infiltration of all points of mucous membrane, where its contact is thoroughly and repeatedly made. Besides, it has a tendency to lessen extreme viscosity of secretion, in partially dissolving it, and is therefore grateful as a palliative remedy, when the ammoniacum mixture has rendered the mucous secretion of the post-nasal space very tenacious and difficult of separation and expulsion. After employing the carbolized spray, we have used latterly, with excellent results, the following powder behind the palate.

R.	Pulv. iodoformi	{	aa.....	3 ss-3 i.
	Pulv. camphoræ			
	Pulv. acaciae.....			3 ii.
	M.			

When the secretion is moderate, and can be detached easily and expectorated, we *occasionally* content ourselves with one or more daily applications of the above, or other properly formulated powder, varying it somewhat, according to the evident indications of the case, and do *not* make use of the spray.

The powder-blower employed by us in the treatment of post-nasal catarrh, and which is represented in the accompanying drawing, may be described as follows: It consists mainly of a glass-bottle with a wide mouth and a capacity of about two ounces. The cork stopper is pierced with two holes, into each of which a bent tube of hard rubber is inserted. One of these tubes reaches nearly to the bottom of the bottle, the other merely passes through the cork. The former, at its outer ex-

tremity, is curved backwards (and without change of configuration), for the posterior nares, to an angle of 120°.*



The latter tube is connected with a single hand-ball by means of india-rubber tubing. One or two rapid and forcible pressures of the hand-ball suffice to force the *medicated powder* into the nasal passages, and cover the turbinated bones *posteriorly*, and the adjacent parts, with a coating of it.

[We take pleasure in stating here that the powder-blower just described is but a slight modification of one first made known to us by Dr. Andrew H. Smith, of New York, and which is especially serviceable in the treatment of those cases where post-nasal catarrh is complicated with a considerable degree of hypertrophy of the turbinated bones.]

Medicated powders modify the condition of the mucous lining most favorably, and apparently produce those alterative changes we are anxious to attain. Besides, they are free of one objection pertaining to the employment of atomized liquids, viz., that by the employment of these latter, endosomatic effects in the direction of the vessels are occasionally produced to excess. Active drugs used under the form of

* The diameter of the terminal orifice of this tube should not be greater than one-eighth of an inch, otherwise an excess of powder may be thrown behind the velum, and produce a most unpleasant feeling of stuffiness.

powder may be applied either pure or mixed to any required extent with inert or feebly efficient agents. Powdered gum is *especially* indicated as the proper VEHICLE of other powders of greater curative properties, whenever a spray is not used, and the mucous membrane of the post-nasal space is only partially or very lightly covered with catarrhal secretions; for its osmotic power is probably developed in a greater degree than that of other powders, and under the circumstances mentioned, it may serve a useful purpose in diminishing infiltration of the sub-mucous layer. Occasionally, we have found useful the inhalation of certain dry vapors, such as those of carbolic acid and iodine, and likewise those of the essential oils extracted from different species of pine. Inasmuch, however, as we have little to add to our familiar knowledge of them, we do not wish to extend our remarks. In conclusion, we give it as our opinion, after considerable thought and experience about the disease which forms the title of this lengthy discourse, that local medication is of service more particularly in diminishing the thickening, and effecting healthful alterations in the patches of mucous membrane situated around the glandular orifices, and thus counteracting, in a measure, the morbific influence upon surrounding parts of the product of secretion of the mucous glands themselves. But we do not believe that it accomplishes much that is worthy of being recorded, in so far as the glands are concerned; for in order to bring back these primitively diseased structures to their normal state, it is essential to have recourse to a long-continued exhibition internally of special medicaments, and what these should be in our estimation we have already made known to you.

By a combined general and local treatment, carried out intelligently and persistently, we may fairly hope, we are firmly convinced, to alleviate almost all, and to cure many of our patients suffering from post-nasal catarrh of long standing and aggravated form.

In no other way do we recognize the possibility, for the present, by means of any known method of treatment, of such good results.

